LESSON PLAN ON

WEEK 4

Name of Teacher: Peter Ekeocha

Class: Year 7 & 8

Average age of learners: 11- 12years

Gender: Mixed

Subject: Mathematics

Topic: Ratio and Proportion

Duration: 40mins

Date: 29th - 2nd February, 2024

CONTENT:

RATIONALE: The knowledge acquired will enable the learners to understand ratio and proportion.

PERFORMANCE OBJECTIVES: By the end of the lesson, given an infographic of a ratio and proportion, chart of concept mapping as well as videos displaying the ratio and proportion, the learners should be able to:

1. **Cognitive Domain (Minds-on):**
2. Solve correctly, ratio.
3. Identify the various ways of solving proportion such as direct, and inverse respectively.
4. Differentiate by solving between ratio and proportion.
5. **Affective Domain (Hearts-on):**
6. Show willingness in the lesson by analyzing correctly the use of ratio and proportion.
7. Appreciate the lesson by answering the teacher’s questions with keen interest.
8. **Psychomotor domain (Hands-on)**
9. Use infographic to vividly represent the factorization, without any mistake.
10. Implore a concept map to show ratio and proportion at a glance without mistakes.
11. **Interpersonal domain:** (Learners’ ability to interact with others and share knowledge):
12. Discuss elaborately in groups and share knowledge and experiences acquired.

**ENTRY/ENTERING BEHAVIOUR:** Learners are familiar with ratio and proportion.

**INSTRUCTIONAL MATERIALS:** Laptop/desktop, projector, videos, printed images, charts, marker, whiteboard and coloured cardboard paper.

**INSTRUCTIONAL PROCEDURE:** Check table below.

**TABLE: INSTRUCTIONAL PROCEDURE**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Duration** | **Content Development** | **Teaching Strategies** | **Instructional Strategies** | **Specific Instructional Materials in Use** | **Teacher’s Performance Activities** | **Students’ Performance Activity** | **Learning Point** |
| 5 mins | Asking Provocative questions | Set Induction | Brainstorming | Marker, Whiteboard | The teacher divides the learners into groups of three members each to brainstorm and identify different parts | Learners answer the probing questions that the teacher has given them after brainstorming. | Learners have listed the approach of solving ratio equation. Methods of solving proportion has been learnt |
| 14mins | Identification of ratio and proportion | Use of examples and illustrations, planned repetition, stimulus variation, questioning and reinforcement. |  |  | The teacher uses a slide to show an infographic of the ratio, plays videos showing the different methods of solving proportion | The learners identify the methods of solving proportion, pay attention to the teacher, generate new ideas and integrate them with other concepts | The learners have learnt how to identify ratio and proportion. |
| 8mins | Differentiating between ratio and proportion |  |  |  |  |  |  |
| 8mins | Requirements for ratio and proportion. | Use of examples and illustrations | Role-play, brainstorming | Coloured cardboard papers |  |  |  |

**EVALUATION:** The teacher evaluates the lesson using the following questions

1. Identify the ratio and proportion.
2. Identify the various methods of solving proportion
3. Differentiate between the direct and inverse proportion.
4. Analyse ways of solving ratio and proportion.
5. Using a concept mapping, show the ratio and proportion at a glance
6. Draw (infographic), a proportion diagram to show its method.

**CLOSURE:** The teacher summarizes the lesson by guiding the learners by going through the main points of the lesson, discussing the ratio, proportion and its various methods. The teacher gives the learners some time to reflect on what they have learnt, ask questions and as well take corrections.

**CLASS FUN:**

1. Express 25:75 as a decimal fraction
2. Express 30% as fraction
3. Express 15months to one year as ratio
4. Express as percentage
5. Modupe and Ayo shared a bundle of cloth containing 52metres in the ratio of 1:3 respectively. How many metres of the cloth did Ayo get?

**ASSIGNMENT (HOMEWORK):**

Man Mathematics textbook for Junior Secondary School 2.

1. Page 38 Exercise B question 1 to 5
2. Page 248 Exercise B3 question 1 to 9

**REFLECTION ON LESSON:**

**CONTENT**

**. Identification of ratio and proportion**

**. Method of solving proportion**

**. Examples involving ratio and proportion**

**Identification of ratio**

Ratio is a way of comparing the magnitude of two things that are related

**Method of solving ratio**

i. Expressing one quantity as a fraction or a ratio of another quantity

ii. Sharing quantities in a given ratio

**Method of solving proportion**

i. Direct method

ii. Inverse method

**Expressing one quantity as a fraction or a ratio of another quantity**

Example 1

Express 10k to 50k

**Solution**

10k to 50k = (divide both side by 10k)

Example 2

Write down the ratio of 3days to 3weeks in their lowest term.

Solution

3days:3weeks

= 3days:21days

= 1:7

**Sharing quantities in a given ratio**

Example 3

Three states have a population of 18million altogether. If their population is in ratio 1:2:3, what is the population of the largest state?

**Solution**

Total ratio = 1+2+3

= 6

The population of the largest state is 9million

Example 5

Share Efe`s midterm`s marks of 80% in the ratio 3:5

Solution

Total ratio = 3+5

= 8

**Proportion by direct method**

Example 7

If 10 bicycles cost #1,500.00, what is the cost of 7 bicycles

Solution

10 bicycles cost

1 bicycle cost

= #150.00

7 bicycles

= #1,030.00

Example 8

Three men can weed a plot in 15days. How many days will 5 men take to weed the pot?

Solution

Men days

3 = 15

5 = x

Applying inverse proportion

5x

x